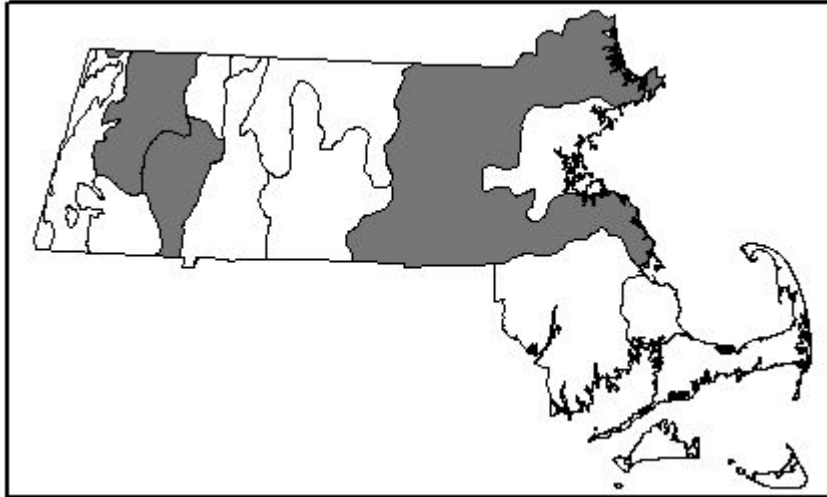


Community Name: SERPENTINE OUTCROP COMMUNITY

Community Code: CT2A1D0000

SRANK: S1



Concept: Open, sparse herbaceous vegetation with little tree or shrub growth, generally under an acre in size; often with markedly different vegetation than in surrounding areas. Tree canopy is often only from surrounding forest: woody species growing on serpentine soils are usually stunted.

Environmental Setting: Usually on small exposed ledges or outcrops of serpentine or other ultramafic [igneous rocks with high percentages of magnesium, often accompanied by iron, chromium and nickel] bedrock, or shallow soil over such bedrock. The soils derived from ultramafic rocks present unusual growing conditions that inhibits growth of many plants: low levels of necessary nutrients, relatively high concentrations of magnesium, and droughty conditions of thin soil over rock. Deeper soils derived from glacial deposits over serpentine, or ultramafic, bedrock do not support a serpentine outcrop community.

Vegetation Description: Large leaved sandwort (*Moehringia macrophylla*) is an absolute indicator of serpentine conditions, but does not occur in all locations. Field chickweed (*Cerastium arvense*) is most abundant on serpentine outcrops, but also occurs in open woods on south -facing slopes. Serpentine areas typically are sparsely vegetated, have increased (relative to surrounding areas) dry adapted plants, and presence of some calciphiles (calcium-loving). The vegetation is often a graminoid -savanna in larger occurrences (in Maryland, for example); in Massachusetts the occurrences are very small, and surrounding vegetation dominate most sites. In forest areas, white pine (*Pinus strobus*), hemlock (*Tsuga canadensis*), red maple (*Acer rubrum.*), red oak (*Quercus rubra*), and birches (*Betula papyrifera* and *B. alleghaniensis*) form a canopy, with witch-hazel (*Hamamelis virginiana*) in a sparse shrub layer. Other associated species include bracken fern (*Pteridium aquilinum*), maidenhair spleenwort (*Asplenium trichomanes*) and grasses. Species considered somewhat calciphilic, such as columbine (*Aquilegia canadensis*), harebell (*Campanula rotundifolia*) and rock spike-moss (*Selaginella rupestris*) are sometime present.

Associations:

Habitat Values for Associated Fauna: The Massachusetts serpentine areas are not large enough to affect larger herbivores, but small animals may be scarcer than normal. Plant cover is generally sparse, leading to less cover and food for animals. Porcupines are frequent in the canopy trees.

Associated Rare Plants:

MOEHRINGIA MACROPHYLLA

LARGE-LEAVED SANDWORT

T

Associated Rare Animals:

NONE KNOWN

Natural Heritage & Endangered Species Program, Massachusetts Division of Fisheries & Wildlife

Examples with Public Access: None known on public land in Massachusetts

Threats:

Management Needs:

Synonyms

USNVC/TNC: Includes part of Cerastium arvense sparsely vegetated Alliance -- Adiantum aleuticum - Asplenium spp. - Cerastium arvense Sparse Vegetation [CEGL006104].

MA (old name): SNE Serpentine Outcrop Community.

ME: Serpentine Outcrop Community.

NH:

VT: Serpentine Outcrop.

NY: Similar to: Serpentine barrens.

CT:

RI:

Weatherbee: Serpentine Outcrop Community.

Author: P. Swain **Date:** 3/28/00